

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A method of watermarking and transferring watermarked material in a system including a transaction server, first and second clients, a first apparatus for applying a perceptible watermark to the material and a second apparatus for removing the watermark, the method comprising the steps of:

transferring from the transaction server to the first apparatus (i) data for creating a watermark, the creating data including (a) data defining an invertible algorithm and (b) data for creating at least one security key associated with the algorithm, and (ii) data for creating a material identifier;

using said first apparatus to apply a material identifier to the material and to apply a perceptible watermark to the material in accordance with the invertible algorithm, wherein the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

transferring from the first client to the transaction server said material identifier and data for inverting the algorithm including said at least one key;

transferring the watermarked material to the second client;

deriving said material identifier from the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second apparatus watermark removal data associated with said material identifier, the removal data including the at least one key and data defining an algorithm for removing the watermark in conjunction with the at least one key; and

using the second apparatus to remove the perceivable watermark using said removal data, so as to remove the perceivable impairment from the material.

Claim 2 (Previously Presented): The method according to claim 1, wherein the first apparatus compresses the material and applies the watermark as part of the compression process.

Claim 3 (Previously Presented): The method according to claim 1, wherein said data defining the invertible algorithm comprises algorithm configuration data.

Claim 4 (Previously Presented): The method according to claim 1, wherein said data defining the invertible algorithm comprises the algorithm.

Claim 5 (Previously Presented): The method according to claim 1, wherein data for creating the material identifier is stored in a data carrier for transfer to the first apparatus.

Claim 6 (Previously Presented): The method according to claim 1, wherein said data for creating a watermark is stored in a data carrier for transfer to the first apparatus.

Claim 7 (Previously Presented): The method according to claim 6, wherein a material identifier and the at least one key are generated during the application of the watermark to the material, and the method further comprising the step of:

storing the generated identifier and key on the data carrier for transfer to the first client.

Claim 8 (Previously Presented): The method according to claim 1, further comprising the step of:

storing, in the transaction server, metadata relating to said watermarked material, wherein the metadata is referenced by said identifier.

Claim 9 (Previously Presented): The method according to claim 1, wherein said removal data is stored in a data carrier for transfer to the second apparatus.

Claim 10 (Previously Presented): The method according to claim 1, further comprising the step of:

storing, on the transaction server, conditions of sale of unwatermarked material.

Claim 11 (Previously Presented): The method according to claim 10, further comprising the step of:

transferring said conditions of sale from the first client to the transaction server.

Claim 12 (Previously Presented): The method according to claim 10, wherein the transaction server transfers said removal data subject to the condition that a buyer has fulfilled the conditions of sale.

Claim 13 (Previously Presented): The method according to claim 1, further comprising the step of:

storing the watermarked material in a recording medium and transferring the watermarked material to the second apparatus on the recording medium.

Claim 14 (Currently Amended): A computer readable data carrier that includes at least one data structure configured to store information, which when executed by a computer causes the computer to perform a method comprising steps of: ~~the data carrier comprising:~~

~~a data area configured to store (i) data for creating a perceptible watermark, the creating data including (a) data defining an invertible algorithm for applying a perceptible watermark to material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material and (b) data for creating at least one security key associated with the algorithm, and (ii) data for creating a material identifier, wherein a reproducing/recording apparatus accesses the data stored on the data carrier.~~

transferring from the transaction server to the first apparatus (i) data for creating a watermark, the creating data including (a) data defining an invertible algorithm and (b) data for creating at least one security key associated with the algorithm, and (ii) data for creating a material identifier;

using said first apparatus to apply a material identifier to the material and to apply a perceptible watermark to the material in accordance with the invertible algorithm, wherein the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

transferring from the first client to the transaction server said material identifier and data for inverting the algorithm including said at least one key;

transferring the watermarked material to the second client;

deriving said material identifier from the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second apparatus watermark removal data associated with said material

identifier, the removal data including the at least one key and data defining an algorithm for removing the watermark in conjunction with the at least one key; and  
using the second apparatus to remove the perceivable watermark using said removal data, so as to remove the perceivable impairment from the material.

Claim 15 (Previously Presented): The data carrier according to claim 14, wherein the carrier is a smart card, and the smart card comprises a processor and a memory unit, wherein the processor is programmed to implement said algorithm.

Claim 16 (Previously Presented): The data carrier according to claim 14, wherein the carrier is a smart card, and the smart card comprises a memory unit configured to store algorithm configuration data defining the invertible algorithm.

Claims 17-19 (Canceled).

Claim 20 (Previously Presented): A system comprising:

a transaction server configured to transfer data for creating a watermark and data for creating a material identifier to a first apparatus, wherein the data for creating the watermark includes data defining an invertible algorithm and data for creating at least one security key associated with the algorithm;

the first apparatus configured to apply a material identifier to the material and to apply a perceptible watermark to the material in accordance with the invertible algorithm, wherein the perceptible watermark is applied as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

a first client configured to transfer said material identifier and data for inverting the algorithm including the at least one key to a transaction server;

the first client further configured to transfer the watermarked material to a second client;

the second client configured to derive said material identifier from the watermarked material and to transmit the material identifier to the transaction server;

the transaction server configured to, subject to predetermined conditions being satisfied, transfer watermark removal data associated with the material identifier to the second client, the removal data includes the at least one key and data defining an algorithm for removing the watermark in conjunction with the at least one key; and

a second apparatus configured to remove the watermark using the removal data.

Claim 21 (Previously Presented): The system according to claim 20, wherein said material is video material.

Claim 22 (Previously Presented): The system according to claim 20, wherein said material is audio/visual material.

Claim 23 (Previously Presented): The system according to claim 20, wherein said material is audio material.

Claim 24 (Previously Presented): The system according to claim 20, wherein said material is data material.

Claim 25 (Previously Presented): The system according to claim 20, wherein the first apparatus comprises:

an information material processing apparatus operable to receive signals representative of information material, and to adapt said signals to an effect of introducing a reversible modification to said information material in accordance with a modification key, said modification being arranged to provide a disturbing effect on the information material to a human recipient by compressing the information material to provide the disturbing effect in accordance with an invertible algorithm;

a data generation processor operable to generate data identifying said information material,

a recording apparatus operable to record said adapted signals and said identifying data on a recording/reproducing medium, and

a data processor operable to receive said identifying data and said modification key and to store said identifying data and data representative of said modification key data on a data carrier.

Claim 26 (Previously Presented): The system as claimed in Claim 25, wherein said recording/reproducing medium is a linear recording medium including capacity for ancillary data, and said identifying data is recorded in said capacity for recording ancillary data.

Claim 27 (Previously Presented): The system as claimed in claim 25, wherein said data carrier is a hand insertable carrier.

Claim 28 (Previously Presented): The system as claimed in Claim 27, wherein said data carrier is a smart card.

Claim 29 (Previously Presented): The system as claimed in Claim 25, wherein said identifying data is a Unique Material Identifier.

Claim 30 (Previously Presented): The system as claimed in Claim 25, wherein said apparatus further comprises:

an information material server arranged to store signals representative of information material, and to retrieve selected signals representative of selected information material items, said information material processing apparatus being operable to adapt said selected signals, said data generation processor being operable to generate said data identifying said selected information material signals.

Claim 31 (Previously Presented): A camera comprising:

an information material processing apparatus operable to receive signals representative of information material, and to adapt said signals to an effect of introducing a reversible modification to said information material in accordance with a modification key, said modification being arranged to provide a disturbing effect on the information material to a human recipient by compressing the information material to provide the disturbing effect in accordance with an invertible algorithm;

a data generation processor operable to generate data identifying said information material,

a recording apparatus operable to record said adapted signals and said identifying data on a recording/reproducing medium, and



a data processor operable to receive said identifying data and said modification key and to store said identifying data and data representative of said modification key data on a data carrier.

Claim 32 (Currently Amended): An apparatus comprising:

a data reading processor operable to receive a data carrier via hand insertion by a user, the data carrier configured to store data for creating a material identifier identifying the material and data for creating a perceptible watermark, wherein the creating data includes data defining an invertible algorithm for applying a perceptible watermark to material, the invertible algorithm, when executed, provides a perceptible impairment to the material, and data for creating at least one security key associated with the algorithm; and

a communications processor operable to communicate said at least one security key and a material identifier created from the data for creating a material identifier to a data processor.

Claim 33 (Previously Presented): The apparatus as claimed in Claim 32, wherein said communications processor is operable to communicate said at least one security key and said material identifier to said data processor via a communications network.

Claim 34 (Previously Presented): The apparatus as claimed in Claim 33, wherein said communications network is the Internet.

Claim 35 (Previously Presented): The apparatus as claimed in Claim 32, wherein said communications processor is operable to receive data representative of sales conditions and

price information and to communicate said sales conditions and said price information with said at least one security key data and said material identifier to said data processor.

Claim 36 (Canceled).

Claim 37 (Canceled).

Claim 38 (Previously Presented): A method comprising the steps of:

applying, using a watermarking apparatus, a removable perceptible watermark to material, the watermark being removable using removal data created during application of the watermark;

applying identifying data to the material to identify the watermarked material;  
registering, with a transaction server, conditions for the removal of the watermark and identifying data identifying the watermarked material;

transferring the watermarked material to a watermark removal apparatus; and  
identifying, to the transaction server, the transferred material; and  
transferring the removal data to the removal apparatus to allow removal of the perceivable watermark if the transaction server indicates that predetermined conditions for removal are satisfied, wherein the watermark is applied using an invertible algorithm, the removal data identifying the invertible algorithm,

wherein the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material.

Claim 39 (Previously Presented): The method according to claim 38, wherein said conditions are conditions of sale of the material.

Claim 40 (Previously Presented): The method according to claim 39, wherein the conditions of sale include paying for the material.

Claim 41 (Previously Presented): The method according to claim 38, further comprising the step of:

using a first client linked to the transaction server by a communications network to register said conditions.

Claim 42 (Previously Presented): The A method according to claim 41, further comprising the step of:

using a second client linked to the transaction server by a communications network to comply with said conditions.

Claim 43 (Previously Presented): The method according to claim 38, further comprising the steps of:

loading the removal data onto a data carrier and transferring the carrier to the removal apparatus when said conditions are satisfied.

Claim 44 (Previously Presented): The method according to claim 43, wherein the removal data is downloaded onto the data carrier from the transaction server via the communications network.

Claim 45 (Previously Presented): The method according to claim 44, wherein the data carrier is a smart card.

Claim 46 (Previously Presented): A system comprising: a watermarking apparatus configured to apply a removable perceptible watermark to material, the watermark being removable by using removal data created during application of the watermark, and to apply identifying data to the material that identifies the watermarked material;

a transaction server configured to register server conditions for removal of the watermark and identifying data that identifies the watermarked material;

a watermark removal apparatus configured to receive the watermarked data;

the transaction server is further configured to, in response to a communication identifying the material received at the watermark removal apparatus, transfer the removal data to the removal apparatus if the transaction server indicates that predetermined conditions for removal are satisfied, wherein

the watermark is applied using an invertible algorithm, the removal data identifies the invertible algorithm, the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material.

Claim 47 (Previously Presented): A server comprising:

a first mechanism configured to receive and store data identifying watermarked material, data enabling removal of the watermarks from material, and data setting predetermined conditions for the removal of watermarks;

a second mechanism configured to receive identifying data that identifies watermarked material from which a watermark is to be removed;

a third mechanism configured to monitor whether the predetermined conditions are satisfied; and

if the conditions are satisfied, a fourth mechanism configured to provide the removal data for transfer to an apparatus for removal of the perceivable watermark,

wherein the watermarks are applied to the material using an invertible algorithm, the watermark is perceptible, the data enabling removal of the watermarks identifies the invertible algorithm, the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material.

Claim 48 (Previously Presented): The server according to claim 47, wherein said predetermined conditions are conditions of sale of the material.

Claim 49 (Previously Presented): The server according to claim 48, wherein the server is arranged to receive and store financial data relating to the sellers of the watermarked material.

Claim 50 (Previously Presented): The server according to claim 48; wherein the server is arranged to receive and store financial data relating to buyers of the watermarked material.

Claim 51 (Previously Presented): The server according to claim 48, wherein said conditions of sale include paying for the material.

Claim 52 (Previously Presented): The server according to claim 51, wherein the server is arranged to monitor transfer of money from the buyer to the seller.

Claim 53 (Previously Presented): A server according to claim 52, wherein the server is linked, by a communications network, with a financial institution to monitor said transfer of money.

Claim 54 (Previously Presented): The server according to claim 47, wherein the removal data includes a template and a security key.

Claims 55-66 (Canceled).

Claims 67-69 (Canceled).

Claim 70 (Previously Presented): A method comprising the steps of:  
applying, to material, a perceptible reversible watermark in accordance with an invertible algorithm,  
receiving, via a first channel, the watermarked material;  
receiving, via a second channel, removal data which enables the removal of the perceivable watermark, wherein the first and second channels follow different paths; and  
removing the watermark using the removal data, wherein the removal data identifies the invertible algorithm, the perceptible watermark being applied to the material as part of a compression of the material, and the invertible algorithm providing a perceivable impairment to the material.

Claims 71-72 (Canceled).

Claim 73 (Previously Presented): A computer program product that stores instructions executable by a computer, wherein the execution of said instructions causes a computer to perform steps comprising:

transferring from a transaction server to a first apparatus (i) data for creating a watermark, the creating data including (a) data defining an invertible algorithm and (b) data for creating at least one security key associated with the algorithm, and (ii) data for creating a material identifier;

using said first apparatus to apply a material identifier to the material and to apply a perceptible watermark to the material in accordance with the invertible algorithm, wherein the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

transferring from a first client to a transaction server said material identifier and data for inverting the algorithm including said at least one key;

transferring the watermarked material to a second client;

deriving said material identifier from the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second apparatus watermark removal data associated with said material identifier, the removal data including the at least one key and data defining an algorithm for removing the watermark in conjunction with the at least one key; and

using the second apparatus to remove the perceivable watermark using said removal data, so as to remove the perceivable impairment from the material.

Claim 74 (Previously Presented): A method of watermarking and transferring watermarked material in a system including a transaction server and at least first and second clients, the method comprising the steps of:

using the first client to (i) create a watermark, defined by (a) an invertible algorithm and (b) at least one security key associated with the algorithm, and (ii) to provide a material identifier;

using said first client to associate the material identifier with the material and apply the watermark to the material in accordance with the invertible algorithm, the watermark being perceptible in the material, the perceptible watermark being applied to the material as part of a compression of the material, and the invertible algorithm providing a perceivable impairment to the material;

storing, in the transaction server, said material identifier and data for inverting the algorithm including said at least one key;

transferring the watermarked material to the second client;

deriving said material identifier associated with the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second client watermark removal data associated with said material identifier, the removal data including at least one key and data defining an algorithm for removing the watermark in conjunction with the key; and

using the second client to remove the perceivable watermark using said removal data.

Claim 75 (Previously Presented): The method according to claim 74, wherein the watermarked material is transferred to the second client via a communications channel.



Claim 76 (Previously Presented): The method according to claim 74, further comprising the step of:

storing in the transaction server metadata relating ~~the~~ said watermarked material, the metadata being referenced to the material by said identifier.

Claim 77 (Previously Presented): The method according to claim 74, comprising the step of:

storing, on the transaction server, financial rules relating to use of the material.

Claim 78 (Previously Presented): The method according to claim 77, wherein the financial rules are referenced to the material by said identifier.

Claim 79 (Previously Presented): The method according to claim 74, further comprising the step of:

storing, on the transaction server, business rules relating to use of the material.

Claim 80 (Previously Presented): The method according to claim 74, further comprising the step of:

storing, on the transaction server, statistical data relating to transactions associated with the material.

Claim 81 (Previously Presented): The method according to claim 74, further comprising the step of:

creating, at the transaction server, files associated with respective items of material which users have been allowed to use by virtue of a business transaction.

Claim 82 (Previously Presented): The method according to claim 81, wherein each file contains data relating to the rules of the business transaction.

Claim 83 (Previously Presented): The method according to claim 81, wherein each file contains metadata relating to the item of material.

Claim 84 (Previously Presented): The method according to claim 81, wherein each file contains the removal data.

Claim 85 (Previously Presented): The method according to claim 84, wherein the removal data is secured against unauthorized access thereto.

Claim 86 (Previously Presented): The method according to claim 81, wherein the transaction server transfers said file to the second client.

Claim 87 (Previously Presented): The method according to claim 85, wherein the step of transferring removal data comprises transferring said file to the second client.

Claim 88 (Previously Presented): The method according to claim 74, further comprising the step of:

storing the watermarked material in a recording medium and transferring the watermarked material on the recording medium to the second client.

Claim 89 (Previously Presented): The method according to claim 74, wherein the first client downloads watermark creation software from the server to create a watermark off-line.

Claim 90 (Previously Presented): The method according to claim 74, wherein the first client interacts with the transaction server to create the watermark.

Claim 91 (Previously Presented): A system comprising:

a first client configured to provide a material identifier and to create a watermark defined by an invertible algorithm, wherein at least one security key is associated with the algorithm;

said first client further configured to associate the material identifier with the material and to apply the watermark to the material in accordance with the invertible algorithm, the watermark being perceptible in the material, wherein the first client is further configured to apply the perceptible watermark as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

a transaction server configured to store said material identifier and data for inverting the algorithm including the at least one key;

a second client configured to receive the watermarked material, derive the material identifier from the watermarked material, and transfer the material identifier to the transaction server;

the transaction server further configured to, subject to predetermined conditions being satisfied, transfer watermark removal data associated with the material identifier to the second client, the removal data including the at least one key and data defining an algorithm for removing the watermark in conjunction with the at least one key; and

the second client is further configured to remove the perceivable watermark using said removal data.

Claim 92 (Previously Presented): The method according to claim 74, wherein said material is video material.

Claim 93 (Previously Presented): The method according to claim 74, wherein said material is audio/visual material.

Claim 94 (Previously Presented): The method according to claim 74 wherein said material is audio material.

Claim 95 (Previously Presented): The method according to claim 74, wherein said material is data material.

Claim 96 (Original): A suite of computer programs containing instructions which when run on a system comprising a server and first and second clients configures the system to operate according to the method of claim 74.

Claim 97 (Currently Amended): A method of watermarking material and transferring the watermarked material in a system comprising at least one first processor, a plurality of second processors, and a communications network for transferring the watermarked material from the at least one first processor to one or more second processors, the method comprising the steps of:

using the first processor to apply a perceptible watermark to material in accordance with the invertible algorithm, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material;

using the communications network in a push mode to transfer the watermarked material from the first processor to the one or more second processors;

subject to predetermined conditions being satisfied, transferring, from the first processor, to the second processor, watermark removal data; and

using the second processor to remove the perceivable watermark using said removal data,

wherein the removal data is secured against unauthorized access thereto.

Claim 98 (Previously Presented): The method according to claim 97, wherein said communications network is an electronic communications network.

Claim 99 (Canceled).

Claim 100 (Previously Presented): The method according to claim 97, wherein the removal data is secured against unauthorized modification thereto.

Claim 101 (Previously Presented): The method according to claim 97, wherein the second processor is linked by a network to other processors.

Claim 102 (Previously Presented): The method according to claim 101, wherein the other processors are operable to access material stored in said first processor.

Claim 103 (Currently Amended): A system comprising:

- a first processor configured to apply a perceptible watermark to material in accordance with an invertible algorithm as part of a compression of the material;
- the invertible algorithm providing a perceivable impairment to the material;
- a communications network configured to transfer the watermarked material from the first processor to one or more second processors;
- the first processor further configured, subject to predetermined conditions being satisfied, to transfer watermark removal data to the one or more second processors; and
- the one or more second processors configured to remove the perceivable watermark using said removal data,

wherein the removal data is secured against unauthorized access thereto.

Claim 104 (Previously Presented): The method according to claim 97, wherein said material is video material.

Claim 105 (Previously Presented): The method according to claim 97, wherein said material is audio/visual material.

Claim 106 (Previously Presented): The method according to claim 97, wherein said material is audio material.

Claim 107 (Previously Presented): The method according to claim 97, wherein said material is data material.

Claim 108 (Previously Presented): A suite of computer programs containing instructions which when run on a system comprising a server and first and second client processors configures the system to operate according to the method of claim 103.

Claim 109 (Previously Presented): A suite of computer programs containing instructions which when run on a system comprising the first and second processors configures the system to operate according to the method of claim 97.

Claim 110 (Previously Presented): A method of watermarking and transferring watermarked material in a system including at least one first processor, a plurality of second processors, and a communications network for transferring the watermarked material from the at least one first processor to one or more second processors, the method comprising the steps of:

using the first processor to (i) create a perceptible watermark, defined by (a) an invertible algorithm and (b) at least one security key associated with the algorithm, and (ii) to provide a material identifier;

using, said first processor, to associate the material identifier with the material and apply the perceptible watermark to the material in accordance with the invertible algorithm, wherein the perceptible watermark is applied to the material as part of a compression of the material, and the invertible algorithm provides a perceivable impairment to the material;

storing said material identifier and data for inverting the algorithm including said at least one key;

using the communications network to transfer, in a push-mode, the watermarked material from the at least one first processor to the plurality of second processors;

subject to predetermined conditions being satisfied, transferring, from the first processor, to the second processor, watermark removal data associated with said material identifier, the removal data including the at least one key and data defining an algorithm for removing the watermark in conjunction with the key; and  
using the second processor to remove the perceivable watermark using said removal data.

Claim 111 (Previously Presented): The method according to claim 110, wherein the watermarked material is transferred to the second processor via an electronic communications link.

Claim 112 (Previously Presented): The method according to claim 110, further comprising the step of:  
storing metadata relating said watermarked material, the metadata being referenced to the material by said identifier.

Claim 113 (Previously Presented): The method according to claim 112, further comprising the step of:  
storing material in the second processor in dependence on metadata associated with the material.

Claim 114 (Previously Presented): The method according to claim 110, further comprising the step of:  
storing financial rules relating to use of the material.



Claim 115 (Previously Presented): The method according to claim 114, wherein the financial rules are referenced to the material by said identifier.

Claim 116 (Previously Presented): The method according to claim 110, further comprising the step of:

storing business rules relating to use of the material.

Claim 117 (Previously Presented): The method according to claim 110, further comprising the step of:

storing statistical data relating to transactions associated with the material.

Claim 118 (Previously Presented): The method according to claim 105, wherein the removal data is secured against unauthorized access thereto.

Claim 119 (Previously Presented): The method according to claim 105, wherein the removal data is secured against unauthorized modification thereto.

Claim 120 (Previously Presented): The system according to claim 103, wherein the material is audio/visual material.

Claim 121 (Previously Presented): The method according to claim 105, wherein said material is video material.

Claim 122 (Previously Presented): The method according to claim 105, wherein said material is audio/visual material.

Claim 123 (Previously Presented): The method according to claim 105, wherein said material is audio material.

Claim 124 (Previously Presented): The method according to claim 105, wherein said material is data material.

Claim 125 (Previously Presented): A suite of computer programs containing instructions which when run on a system comprising first and second processors configures the system to operate according to the method of claim 110.